

성인 미세변화 사구체신염에서 재발을 예측하는 인자

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Predictors for Relapse in Adult Minimal Change Disease

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Backgrounds: Minimal change disease (MCD) is well-known benign primary glomerulonephritis (GN) in adults because of their distinct rare renal progression to end-stage. However, their relapse-associated morbidity has been underestimated. In this study, we aimed to explore the predictors of relapse in adult MCD patients.

Methods: We reviewed clinical and pathologic characteristics of adult MCD patients from Seoul National University Hospital from 1979 to 2013. Patients who were presented by nephrotic syndrome and followed up more than 12 months were included. Patients who relapsed more than twice were considered as relapse group and others were classified non-relapse group. Primary outcomes were relapse after initial treatment.

Results: A total of 169 patients were included in the final analysis. Among them, median age at the time of diagnosis was 45 (25-57) years and 92 (54.4%) were men. During median follow up of 76 (35-135) months, only 58 (34.3%) patients did not experience any relapse. Remaining 110 patients, 37 (22.0%) relapsed once, 31 (18.5%) twice, 14 (8.3%) three-times and 28 (16.7%) relapsed more than three-times. The number of relapse was inversely correlated with age at the time of biopsy ($R=-0.195$, $p=0.011$). The relapse group were younger than non-relapse group (40.1 ± 17.4 vs 48.8 ± 18.1 years, $p=0.003$). Moreover in the pathologic characteristics, the relapse group have lesser proportion of combined acute tubular necrosis (ATN) than others (8.3% vs. 24.6%, $p=0.008$) and mesangial proliferation (35.8% vs 52.6%, $p=0.047$). Interestingly, younger age less than 45 years (adjusted odds ratio [OR], 2.865; 95% confidence interval [CI], 1.323-6.205; $p=0.008$), lower albumin level, absence of ATN (adjusted OR, 3.808; 95% CI 1.364-10.619; $p=0.011$) and mesangial proliferation (adjusted OR, 2.110; 95% CI 1.006-4.425; $p=0.048$) were the independent risk factors for relapse of adult MCD in the stepwise multivariate binary logistic regression analysis.

Conclusions: In this study, we proved that younger MCD patients had a higher risk of relapse. Moreover, lower albumin level, and absence of ATN or mesangial proliferation were significant predictors for relapse in adult MCD patients. Further study should be warranted to clarify these results.

Key Words: 미세변화신증후군, 재발, 예측인자

Minimal change disease, Relapse, Predictor